

ART. III.—*New or Little-known Victorian Fossils in  
the National Museum, Melbourne.*

PART VI.—NOTES ON DEVONIAN SPIRIFERS.

BY FREDERICK CHAPMAN, A.L.S., &c.,

National Museum.

(With Plate V.).

[Read 8th June, 1905].

A NOTE ON THE IDENTITY OF SPIRIFER LAEVICOSTA, MCCOY  
(*non* VALENCIENNES), WITH *S. YASSENSIS*, DE KONINCK.

The earliest record of *Spirifer laevicosta* as a Victorian fossil was given by Selwyn in 1866.<sup>1</sup> In the following year Prof. McCoy wrote<sup>2</sup> regarding the limestone fossils of Buchan, Gippsland, that there was an "abundance of the *Spirifera laevicostata*, perfectly identical with specimens from the European Devonian Limestone of the Eifel."

The occurrence of this spirifer was subsequently mentioned in two Progress Reports and an Exhibition Essay by McCoy, and it was finally figured and described in the Prodrömus of the Palaeontology of Victoria.<sup>3</sup>

In view of the special detailed work on the classification of the brachiopoda published since 1876, giving a better idea of the limitation of specific forms, the publication of these notes may now be opportune.

The Australian species, which has until now been referred to as *S. laevicosta* (or *laevicostata*), shows marked specific differences from the *S. laevicosta* of Europe (Devonshire and the Eifel). It is, however, somewhat allied to the latter species as a Middle Devonian type of spirifer, but is not a typical

---

1 Phys. Geogr. and Geol. Vict., p. 10 [Exhibition Essays]; (the specific name was misprinted "*laevicostata*").

2 Ann. Mag. Nat. Hist., ser. 3, vol. xx., 1867, p. 198.

3 Decade iv., 1876, p. 16, pl. xxxv., figs. 2-2b.

ostiolate form (with non-plicate median fold and sinus), since the median fold, in the larger and fully-developed specimens, carries a longitudinal groove.

Points of difference between the European *S. laevicosta*, Val. and the Victorian *S. yassensis*, de Kon<sup>1</sup>:—

The specimen which McCoy selected for figuring in the Decades is unusually large,<sup>2</sup> and at a first glance, one acquainted with the European species might see a general resemblance between the two forms.

The Victorian spirifer, however, is sub-ovate in outline, as in the New South Wales specimens, rather than sub-quadrate, as in the European form. The shell is less turgid, the compression also affecting the median fold, which is not so inflated as that of *S. laevicosta*; there is also a longitudinal groove usually present, especially in the larger Victorian specimens, which is not seen in *S. laevicosta*. This larger character reminds one of a similar feature in the Devonian *S. bifidus*, Roemer<sup>3</sup> and the Silurian *S. bijugosus*, McCoy.<sup>4</sup> The median sinus is narrower and deeper in the central area, and not so acutely V-shaped on the posterior margin of the shell. The shoulders on either side of the beak are steeper and more concave.

The plications are of the same average number in both cases, and show a variation between 11 and 14 counted on either side of the median fold.

The width of the Victorian *S. yassensis* ranges from 13 to 50 mm.

*Spirifer yassensis* was first named in MS. by the Rev. W. B. Clarke;<sup>5</sup> and it was afterwards described under the same name by de Konick<sup>6</sup> from specimens obtained from the Devonian limestones of Yass. As I have previously remarked, the New

---

1 In this I have had the advantage of comparing a long series of the European *S. laevicosta* from the Eifel, in the Nat. Mus. Collection.

2 Mr. A. J. Shearsby, of Yass, informs me that he has met with equally large specimen, in the Devonian of Yass, although the fossil is commonly like that figured by de Konick, as regards size. There is also a larger specimen than that figured by McCoy in the collection of the National Museum, from Buchan, presented by C. W. Nicholson (See pl. v., fig. 2, of this paper).

3 Versteinerungen des Harzgebirges, 1843, p. 13, pl. iv., fig. 16.

4 Synopsis Sil. Foss. Ireland, 1846, p. 36, pl. iii. fig. 23.

5 Sedimentary Formations of New South Wales, 1875, 3rd. ed., p. 15.

6 Foss. Pal. Nouv-Galles du Sud, 1876, p. 104, pl. iii., fig. 6.

South Wales specimens, as a rule, are smaller, than those from Victoria: but some of the Buchan specimens are quite as small, being veritable micromorphs, and agreeing in all their characters with the Yass specimens.

Victorian Localities for *S. yassensis*.—Bindi, head of the Tambo River; Buchan, Murrindal River; and Tabberabbera, at the junction of the Mitchell and Wentworth Rivers.

DESCRIPTION OF *SPIRIFER HOWITTI*, SP. NOV. (Pl. V., Figs. 4-6).

Shell moderately well-inflated, compressed at the cardinal extremities; sub-quadrate to sub-elliptical, the hinge-line varying in proportion according to length of shell. The chief distinctive characters are the strong plications, 6 to 8 on either side of the median fold; median fold with 2 strong plications, the sinus with two weaker ones, sometimes nearly obsolete; area large; ventral beak much elevated, pointed and only slightly incurved; delthyrium large; dental lamellae well-developed; unweathered specimens show conspicuous, concentric lamellae on the shell surface.

Measurements of three specimens expressed in millimetres:—

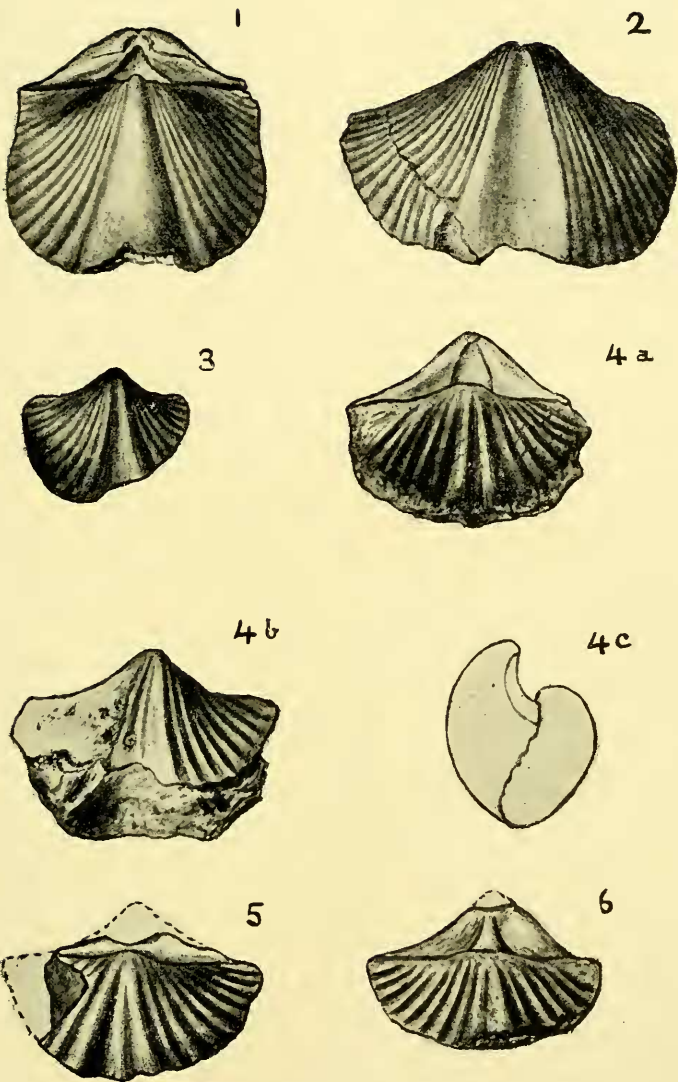
	A.	B.	C.
Length of ventral valve	21.5	- 24.5	circâ 19
Width of shell	- 28	circâ 28	circâ 29
Greatest thickness	- 15.5	- 23.5	- 15.5
Height of cardinal area	4	- 6.5	- 7

This species falls into the section of the Lamellosoi, having a lamellated shell-surface. It apparently belongs to the *S. mucronatus* type of shell, so far as external characters go, described by Conrad from the Hamilton Group (Middle Devonian) of New York.

*S. howitti* somewhat resembles in outline *S. pittmani*, lately described by Mr. W. S. Dun from the Devonian of County Cunningham, New South Wales.<sup>1</sup> That species, however, is one of the ostiolate spirifers, and, further, is more numerously plicated.

Locality.—From the Middle Devonian limestone of Bindi, Gippsland, Victoria. Presented by Dr. A. W. Howitt, by whose

<sup>1</sup> Records Geol. Surv. N.S.W., vol. vii., pt. IV., 1904, p. 320, pl. lxi., figs. 4, 4a, b.



F.C. Del.

Devonian Spirifers from Victoria, etc.